AUTHOR INDEX

Agati, G. 185
Agin, P. P. 705
Agostiano, A. 449
Allen, J. 629
Altamirano, M. 529
Angel, P. 409
Antunez, A. R. 75, 231
Ara, G. 561
Arkins, S. 431
Arnason, J. T. 35
Asakura, T. 505
Ashwood-Smith, M. J. . . . 529

Baccichetti, F. 221
Baker, A. 523
Blakefield, M. K. 867
Bandyopadhyay, S. 765
Bao, F. 479
Barmenkov, Yu. O. 851
Bascoul, J. 197
Bastyns, K. 9
Batova, E. E. 473
Baumgartner, R. 569
Beer, J. Z. 625
Bélanger, D. 887
Ben-Hur, E. 231
Benard, F. 809
Berger, M. 809
Berrebi, C. 549
Biade, S. 55
Birkeland, K. E. 125
Birnbaum, D. 745
Bogomolni, R. A. 605
Bohorquez, M. D. 677
Bojarski, C. 381
Bonneau, R. 349
Bordin, F. 221
Bottiroli, G. 575
Bouas-Laurent, H. . 335, 349
Boyer, B. 549
Boyle, J. M. 723
Brambilla, M. 515
Brault, D. 587
Briggs, W. R. 595, 773
Brotin, T. 335, 349
Bücker, H. 397
Bunting, J. R. 81

Cadet, J. 809
Calkins, J. 867
Canaani, O. 873
Capozzi, A. 221
Carlassare, F. 221
Carpentier, R. 449
Cascinelli, N. 515
Celewicz, L. 823
Ceska, O. 529
Chakrabarti, B. 753, 765
Chambron, J. 491
Chattopadhyay, D. 765
Chaudhury, N. K. 815
Chernomorsky, S. 205
Chignell, C. F. 359, 533
Choi, S. J. 457
Cilento, G. 267, 279, 895
Clay, M. E. 75, 231
Clemente, C. 515
Cohen, S. M. 125
Conconi, M. T. 221
Cooper, T. M. 1
Crane, R. L. 1
Croce, A. C. 575

da Silva Knudsen, F. 267, 279
Dabestani, R. 533
Danshina, S. V. 735
Dau, H. 873
Daub, M. E. 373
De Fabo, E. C. 165
De la Rosa, F. F. 367
Decout, J.-L. 639
Dellinger, M. 587
Desvergne, J.-P. . . . 335, 349
Devasagayam, T. P. A. . . 511
Di Mascio, P. 39
Doshi, A. 465
Dougherty, T. J. 145
Dousset, N. 197
Drabent, R. 381
Drachev, L. A. 735, 741
Dubertret, L. 55
Dunn, L. A. 305

Eckhardt, C. J. 629
Edelson, R. L. 839
Eftink, M. R. 29
Ehrenberg, B. 89
Engelborghs, Y. 9
Engler, D. A. 29
Ensminger, P. A. 437
Erickson, C. 397
Esaki, K. 783
Eschweiler, U. 397
Escobar, J. A. 895
Evans, H. H. 75

Fages, F. 349
Feix, J. B. 483
Ford, W. E. 159
Fourtanier, A. 549
Freeman, A. G. 417
Fuchs, N. 569
Fukshansky, L. 857
Fusi, F. 185

Galán, M. 367
Galland, P. 239, 247
Galpern, M. G. 691
Galston, A. W. 313
Garbo, G. 133
Gasparro, F. P. 839
Gatt, S. 55
Ghiron, C. A. 29
Ghosh, S. K. 765
Glickman, R. D. 191
Goetze, D. C. 449
Görner, H. 173, 681
Gracia, A. M. 549
Grajek, H. 381
Guèrin, B. 35
Guiotto, A. 221
Gutterman, M. 89
Guzzo, A. V. 665

Ha, C. S. 561
Hahn, K. M. 17
Hartman, P. S. 103
Hastie, S. B. 17
Hastings, J. W. 293
Havaux, M. 621
Henderson, B. W. 145
Herman, T. S. 561
Herrlich, P. 409
Hieda, K. 541
Hill, J. S. 697
Hohl, N. 239, 247
Holden, D. A. 301
Horneck, G. 397

Inaba, H. 903
Ippendorf, H. 511
Iwahata, S. 505
Iwatsuki, K. 469

James, R. H. 625
Jocham, D. 569

Johansen, S. K. 125
John, L. 839
Joshi, K. 113
Joshi, N. B. 113
Joshi, P. G. 113

Kagan, I. A. 63
Kagan, J. 63
Kalyanaraman, B. 483
Kamat, P. V. 159
Kaneko, M. 505
Kanofsky, J. R. 523
Karatani, H. 293
Karlsson, P. E. 605
Karukstis, K. K. 125
Kaufman, L. S. 595
Kaufmann, R. 287
Kaulen, A. D. 735, 741
Kaye, A. H. 697
Kaye, J. 911
Keck, R. 133
Kelley, K. W. 431
Kelly, J. M. 681
Kennedy, J. C. 729
Kenney, M. E. . 231, 677, 691
Kern, P. 549
Kessel, D. 397
Khorana, H. G. 741
Khurana, J. P. 789
Kirsch-De Mesmaeker, A. 681
Klemens, F. K. 671
Kligman, L. H. 141
Konjevic, R. 789
Kozhevnikov, N. M. 851
Kraml, M. M. 35
Krasnovsky, Jr., A. A. ... 691
Kubiak, C. P. 479
Kuhn, H. 313
Kumar, A. 401
Kumar, H. D. 401
Kurucsev, T. 887
Kusewitt, D. F. 417

Labat-Robert, J. 549
Lam, J. 63
Lam, K.-W. 191
Langlois, R. 809
Leblanc, R. M. 887
Lecomte, J.-P. 681
Lee, C. S. 323
Leisman, G. B. 373
Lekchiri, Y. 639
Levin, P. P. 473
Ley, R. D. 417
Lhomme, J. 639
Lipovskaya, M. Yu. 851
López-Figueroa, F. 949
Lown, J. W. 359
Lukjanetz, E. A. 691

MacGill, R. S. 47
Madzak, C. 39
Maguire, G. 133
Mahajan, S. 119
Majone, F. 221
Malik, Z. 89
Marchesini, R. 515
Marshall, A. 103
Martin, H.-D. 511
Martinez v. Remisowsky, A. 857
Maruthi Sai, P. S. 119
Mascheroni, L. 515
Matsunaga, T. 723
Mazière, C. 55
Mazière, J. C. 55
McClendon, J. H. .. 629, 857
McDonagh, A. F. 185
McFarland, M. 911
McGarvey, C. E. 301
McMillin, D. R. 671
Mehta, B. 35
Menck, C. F. M. 39
Menter, J. M. 705
Michl, J. 335
Miller, G. C. 47
Miller, S. A. 625
Mitani, H. 97
Mizuno, N. 783
Moan, J. 931
Mogi, T. 741
Mohammad, T. 631
Moision, R. M. 125
Mondon, P. 713
Montes, J. G. 213
Moore, J. V. 425
Mora, L. 55
Morgan, A. R. 133
Morlière, P. 55
Morris, T. F. 529
Morrison, H. 631
Motten, A. G. 533
Moyá, M. L. 367

Nadeau, P. 729
Nakajima, S. 137
Natarajan, L. V. 1
Nègre-Salvayre, A. 197
Nelson, D. A. 665
Niggli, H. J. 793
Nikaido, O. 723
Nitzan, Y. 89
Niyogi, S. K. 29
Noonan, F. P. 165

Obermeier, K. A. 1
Ohta, N. 137
Oleinick, N. L. 75, 231
Oseroff, A. R. 561
Ouellet, R. 809
Ouzafe, M. 491

Paillous, N. 197
Palaszynski, E. W. 165
Pardini, R. S. 47, 831
Perez, M. I. 839
Petryka, Z. J. 729
Phillips, D. R. 697
Pignoli, E. 515
Poff, K. L. 789
Ponta, H. 409
Poretz, R. D. 205
Porst, M. 773
Postanogova, N. V. 741
Pottier, R. H. 729
Poulet, P. 491
Pratesi, R. 185

Quintern, L. E. 397

Rahmsdorf, H. J. 409
Rahn, R. O. 309
Rampersaud, A. 133
Ramponi, R. 575
Ravanat, J.-L. 809
Rebeiz, C. A. 431
Rebeiz, C. C. 431
Rebeiz, N. 431
Redmond, R. W. 35
Rehms, A. A. 257
Reiss, J. A. 697
Repas, L. M. 287
Rerko, R. M. 75
Reszka, K. 359
Ribeiro, D. T. 39
Rihter, B. D. .. 231, 677, 691
Rodgers, M. A. J. .. 677, 691
Rodriguez, A. 367
Rüdiger, W. 949

Sabourin, C. L. K. 417
Saini, G. S. S. 815
Sakata, I. 137
Salmon, S. 55
Salvayre, R. 197

Sánchez, F. 367
Santus, R. 55
Sarasin, A. 39
Sayre, R. M. 141, 705
Scaiano, J. C. 35
Schäfer, E. 437
Schauf, B. 287
Scheer, H. 119
Schulte-Frohlinde, D. . . . 173
Seely, G. R. 257, 319
Sellin, H. G. 309
Selman, S. H. 133
Seltzer, S. 745
Sen, A. C. 753
Senger, H. 239, 247
Shafirovich, V. YA. 473
Shahin, M. M. 713
Shaw, A. A. 647, 657
Shetlar, M. D. . 647, 657, 823
Shim, S. C. 323, 457
Shima, A. 97
Short, T. W. 773
Siebzehnrübl, S. 119
Sies, H 39, 511
Sik, R. H. 533
Singh, R. J. 483
Skalkos, D. 133
Skulachev, V. P. . . . 735, 741
Sopory, A. 465
Sopory, S. K. 465
Spikes, J. D. 797
Srinivas, G. 401
Stark, G. 461
Stein, B. 409
Stepp, H. 569
Stern, L. J. 741
Strasser, R. J. 621
Strässle, M. 461
Strickland, P. T. 723
Sundberg, R. J. 17
Sykes, S. M. 625

Takemura, T. 137
Taylor, W. D. 213
Tchir, M. F. 301
Teicher, B. A. 561
Testori, A. 515
Thomas, C. 47, 831
Tollin, G. 611
Tossi, A. B. 681
Tuveson, R. W. 63
Tyagi, R. 401

Ueno, N. 753
Unsöld, E. 569
Utermöhlen, R. 349

Vaghi, P. 575
van Dam, H. 409
van der Eb, A. 409
van Lier, J. E. 809
Vardaxis, N. J. 697
Varshney, A. 561
Vásquez-Vivar, J. 895
Venturoli, D. R. 15
Verma, A. L. 815
Vicioso, E. F. 231
Vyas, D. 401

Wainschel, L. A. . . . 647, 657
Wala, M. 173
Waluk, J. 335
Wang, G.-R. 63
Wang, T. P. 63
Warpeha, K. M. F. 595
Warrington, P. J. 529
Watanabe, N. 903
Weagle, G. 729
Weatherall, I. L. 305
Werner, T. 511
West, C. M. L. 425
Willis, I. 705
Wilson, T. 293
Wong, C. 205
Woodburn, K. W. 697

Yamada, H. 541
Yamane, Y. 839
Yasuhira, S. 97
Yun, M. H. 457

Zaitsev, S. Yu. 851
Zeiger, E. 605
Zhao, Z.-G. 611
Żurkowska, G. 381

SUBJECT INDEX

absorption coefficient 857
acrylamide 9
action spectrum . 47, 165, 469, 541, 705, 867
active oxygen species 75
acyl azide 301
adaptation 745, 873, 949
adducts 103, 457, 639
adenosine 457
aggregation 119, 257
algae 867, 949
algal rhodopsin 949
4-(2'-amino-5'-carboxyphenyl)amino-
benzoic acid 647
δ-aminolevulinic acid 431
4-(4'-aminophenyl)aminobenzoic acid . 647
AMN 903
amphiphile 301
anaphylatoxin 783
anthracenes 349
anthranilic acid 753
anthrapyrazole 359
anthraquinones 125
anticancer agents 359
antiskin allograft response 839
AP-1 409
aquatic habitats 949
Arabidopsis thaliana 789
arginine residues 741
ascorbic acid 191, 753
assay methods 119, 723
assembly inhibition 17
association 257
asymmetry 313, 857
auxin distribution 313
azidoformate 301
azurin 671

Bacillus subtilis 389
bacterioopsin 745
bacteriorhodopsin 735, 741, 745, 851
bacteriorhodopsin structure 741
behavioral mutants 239, 247
benzanthrone 533
benzochlorins 133
benzopsoralens 221
bergamot oil 529
bergamottin 529
bilayers 611
bile pigments 185
bilirubin 185
biochemistry 549
biological UV-dosimetry 389
Bioluminescence .....
..... 267, 279, 287, 293, 895, 903
biophotons 287
bis-benzylidene camphosulfonic acid
derivative 549
bladder tumor 569
blue light effects 437, 773, 789
blue light receptors 595, 949
blue light response 605
bond homolysis 479, 482
BOOK REVIEWS 629, 630
boundary conditions 857
brain tumor cells 113
bromcresol purple 611

Caenorhabditis elegans 103
c-jun 409
cAMP induction 165
cancer .....
113, 133, 145, 359, 417, 431, 561, 569, 931
capacity enhancement 213
capsorubins 511
β-carbolines 753
carcinoma cells 561
carotenoids 511, 605
cataractous lens 765
catechols 359
cationic dyes 81
cell culture 437
cell killing 231
cell membrane DNA 839
cells 97,
231, 437, 523, 587, 697, 793, 931, 839, 831
cercosporin 373
chalcone synthase 437
chemical properties 305
chemiexcitation 267, 279, 895
chemiluminescence 137, 267, 279, 895
chemotaxis 783
Chinese hamster cells 231
chlorine 911
2-chloro-3,11-tridecadiene-5,7,9-triyn-1-ol .
..... 63
chlorofluorocarbons 911
chlorophyll *a* .. 125, 257, 319, 611, 621, 887
chlorophyll fluorescence 125, 621
chromophore 735
chronic UVA 549
circular dichroism 1
cis-trans isomerization 165, 745

cis-urocanic acid 165
clearance times 729
clinical observations 549
$^{14}CO_2$ uptake 401
cochicine 17
collagen 549
colloidal silica 159
concentration depolarization 381
confocal laser scanning microscopy ... 697
cooperativity 9
corneal tumors 417
crosslinks 103
cucumber seedlings 287
cultured fish cells 97
cyanobacteria 119
cyclobutane dimer 541, 723
cyclobutyl-dithymidine 723
cycloheximide 97
cytochrome *c* oxidase 205
cytosine 793
cytotoxicity 197, 697

dark adaptation 745
DCIP photoreduction 125
decomposition 741
2'-deoxyganosine 809
detector film 389
deuteroporphyrin 89
α-diazoketone 301
dibenzobarrelenoctabutoxy-phthalocyanine 677
dicarbonyl polyenes 511
4,4'-dicarboxy-2,2'-bipyridinebis(2,2'-bipyridine)ruthenium(II) 505
dienestrol 279
diethylstilbestrol 267, 279
dimerization 541, 793
dioxalyl polyenes 511
diphosphine 479, 482
discriminant analysis 141, 515
DNA 39, 63, 173, 221, 231, 309, 529, 631, 681
DNA (pBR322) 63
DNA damage 39, 231
DNA repair 103
DNA strand breaks 173, 221
DNA synthesis 221
dodecylpyridinium (iodide) 257
dose-response relationships 97, 705
double-strand breakage 173
dye binding 309

early response genes 409
earth's surface 911
E,E-dienestrol 267
eicosanoids 145
electron transfer 35, 63, 125, 611, 671, 681, 815
electron transport 449
emission anisotropy 29, 381
EMT6 cells 831
endoergonic energy transfer 677
endonuclease sensitive sites 97
energy transfer 119, 381, 677
enhanced reactivation 213
Environmental photobiology ... 137, 290
epicotyl 313
EPR 359
erythrocytes 63
Escherichia coli 63
etiolated pea 313
exciplex formation 815
excited state 29, 159, 185, 381, 815
exciton-coupling 185

FANFT-tumor 133
Fe^{3+} ions 367
fibroblast 165
fibronectin 549
filter 625
flash photolysis 159, 473, 479, 482
flavanoids 437
flavins .. 239, 247, 293, 381, 437, 595, 773
flavin mononucleotide 293, 381
flavomononucleotide dimer 381
fluorescence 9, 29, 89, 113, 119, 257, 319, 349, 381, 569, 595, 665, 713, 729, 873
fluorescence anistropy decay 29, 381
fluorescence concentration quenching . 381
fluorescence imaging 287, 575
fluorescence excitation spectra 319
fluorescence quenching 29, 125, 381
fluorescence spectroscopy 113
fluoride ion 231
forward-scattering absorption 705
freshwater algae 949
fungi 373
furocoumarins . 221, 457, 529, 631, 713, 839

genetics 789
5-geranoxypsoralen 529
glioma cells 697
glutamine residues 741
glyceraldehyde-3-phosphate dehydrogenase 9
glycosylation 753
Gram negative bacteria 89
gramicidin 461
guard cell protoplasts 605
guard cells 605

hairless mouse 549
halogenated pyrimidine 309
heat stress 621
hematoporphyrin 797
hematoporphyrin derivative . 113, 425, 797
hemolysis 63
Herpes simplex 213
histamine 165
histology 549
Hoechst 33258 309
holography 851
horseradish peroxidase .. 267, 279, 895, 903
HPLC 587, 605, 793
human epidermal growth factor .. 29, 381
human lens 753, 765
human lens pigments 765
human serum albumin 185
human transformed fibroblasts 75
hydrogen bonding 665
hydroquinone 611
4-(4'-hydroxyphenyl)aminobenzoic acid 647
4-hydroxypropiophenone 267, 279
hypericin 47, 831
hyperplasia 705
hypoxia 137, 145
hypoxic 561

immunoassay 723
immunosuppression 165
in vivo systems 729
incident radiation 949
indole radical 895
indole-3-acetic acid 313, 895
indole-3-acetic acid ethyl ester 895
infrared radiation 1, 625
interferometry 851
intermediates 735
intersystem crossing 349
intracellular accumulation 575
intracellular distribution 575
5-iododeoxyuridine 309
ion channel 461
ionizing radiation 561
irreversible process 9

junB 409

Kubelka-Munk theory 857
kynurenic acid 765

land plants 949
laser bioeffect 191
laser flash photolysis ... 159, 473, 479, 482
late effects 145
lens fluorophores 753, 765
lens pigments 753, 765
leukemia cells 523
LHC II 873
lifetime 671
light conditions 949, 857
light damage 191
light gradient 857
light penetration 145, 287
light piping 287
light-states 873
linear dichroism 335
lipid peroxidation 63, 197
lipid synthesis 75
lipids 63, 75, 197, 523
low density lipoprotein 197
low-level chemiluminescence 903
low-level electrochemiluminescence .. 903
luciferase 293
luminescence 287, 293
luminescence spectrum 293

magnetic circular dichroism 335
magnetic field effect 473
magnetic field sensitive probe 473
malnutrition 765
marine algae 949
measurement device 141
mechanism 81
Mehler reaction 449
melanoma 515
membrane 63, 449, 461, 505, 735, 741, 839
membrane damage 63
membrane surface 735
merocyanine 540 483
5-methoxyisopsoralen 631
5-methoxypsoralen 631
8-methoxypsoralen 631, 713, 839
5-methyl-2'-deoxycytidine 823
5-methylcytosine 823
microspectrofluorometry 575
mitochondria 47, 81
mitogenetic radiation 287
monoclonal antibody 723
multi-flux approximation 857
multidrug resistance 397
mutagenesis 39, 713, 741
mutagenicity at the tk locus 75
mutants 103, 239, 247, 741, 789
mutant bacteriorhodopsin 741
myeloperoxidase 895
myristate 257

NADH 903
naphthalocyanines 691, 809

$NDPO_2$ 511
near-UV/blue-light 239, 247
nematode 103
neoplastic cells 431
neutrophils 895
nevi 515
nitrate reductase 401
nitrogenase 401
NMN 903
non-photodynamic damage 63
nonradiative energy transfer . 119, 381, 677
Nostoc spongiaeforme 401
nucleic acids 681

opossum 417
oxic 561
oxidase reaction 903
oxidation 319
oxygen 505
oxygen behavior 137
oxygen dependence 831
oxygen evolution 125
oxygenase 293
ozone 911
ozone depletion 911

PABA photochemistry 647, 657
partition coefficients 697
perimeter model 335
perylenequinone 373
pH decrease 741
pharmacokinetics 569, 729
phase transition 473
1-phenyl-1,3,5-heptatriyne 323
pheophorbide *a* 205
phorbol ester 409
phospholipid bilayer 473
phosphorescence 671
phosphorescence quenching 671
phosphorylation 465, 873
photoacoustics 491, 873
photoaddition 323, 639
photoadducts 103, 457, 639
photoaffinity 17
photoaging 625
photobacterium 293
photobleaching 797
Photochemistry 35, 119, 159, 173, 185, 191, 257, 301, 323, 359, 367, 373, 457, 479, 483, 491, 631, 639, 647, 657, 797, 809, 815, 823
photochemotherapy 931
photochromism 1, 119
photocross-linking 631
photocycle 735
photocyclization 631
photocytotoxicity 831
photodamage 793
photodamaged effector T cells 839
photodestruction 431
photodynamic action ... 63, 491, 691, 831
photodynamic damage 63
photodynamic diagnosis 569
photodynamic therapy .. 75, 113, 133, 145, 205, 231, 425, 431, 483, 523, 561, 797, 931
photoelectric potential 741
photoelectrochemistry 449
Photofrin II 75, 569, 587, 797
photogenerated radical 479, 482
photoinduced electron transfer 681
photoionization 159, 173
photoisomerization 165, 185, 745
photokinesis 469
photoluminescence 505
photolysis 173, 911
photolysis at 193 nm 173
Photomedicine 113, 145, 231, 425, 431, 569, 575, 587, 729, 839, 931
Photomorphogenesis 239, 437, 465, 595, 621, 773
photomorphogenic responses 949
Photomovement 247, 313, 469, 605, 783, 789, 867
photooxidation 191, 815
photooxidation mechanism 815
photoperiodism 949
photosensitized hypoxia 137
(6-4) photoproduct 541, 723
photoproducts 483, 529, 541, 544, 723
photoprotection 621
photoreactions 173, 367, 457, 823
Photoreception 165, 857
photoreceptor pigment 789
photoreceptors ... 239, 247, 773, 789, 949
photorepair 97
Photosensitization 35, 39, 47, 55, 63, 75, 81, 89, 113, 133, 145, 197, 205, 231, 309, 397, 461, 483, 523, 529, 533, 681, 691, 697, 765, 831, 809, 931
photosensitized inactivation 461
photosensitizers 137, 145, 205, 373, 483, 677
Photosynthesis 119, 125, 257, 319, 449, 473, 611, 873, 887, 949
photosynthetic organisms 949
photosystems 449, 621, 949
photosystem I 949
photosystem II 449, 949
Photosystem II (spinach chloroplast) .. 125
phototaxis 867
Phototechnology 17, 29, 141, 305, 389, 515, 625

phototherapy 185
phototoxicity 35, 533, 697
phototropism 239, 247, 313, 789
phthalocyanine 231, 575, 691, 809
phycobiliprotein 119, 401
phycobilisome 119
phycoerythrocyanin 119
Phycomyces blakesleeanus 239, 247
phytochrome 465, 949
Pisum sativum 773
plaque effect 213
plaque size 213
plasma membrane 595
plastic 625
podophyllotoxin 17
poly(L-glutamic acid) 1
polyethylene 257, 319
polymer films 851
polymethylmethacrylate 625
polymorphonuclear neutrophil 783
polymyxin nonapeptide 89
polynucleotides 173
polypeptide 1
porphyrin . 89, 397, 575, 587, 697, 729, 815
pre-psoralens 631
preillumination 97
protein cross-linking 305
protein kinases 465
protein phosphorylation 773
proteins 523
proton gradient 611
proton pump 741
proton transfer 735
protoplasts 605
protoporphyrin IX 431
proximity effect 665
psoralens 221, 457, 529, 631, 639, 783, 839
$Pt(Rh\text{-}123)_2$ 561
pterins 239, 247, 597
purple membrane 735
PUVA 783
pyridones 665
pyrimidine dimer 97

quantum yield 185, 301, 349
quenching 9, 505, 523, 681
quinones 611, 647
quinone binding protein 125
quinone diimines 647
quinone monoimines 647

rad mutants 103
radiationless deactivation 665
radiative transfer 857
radiometry 141
RAPID COMMUNICATIONS . . 165, 631
ras gene 417
recombinogenesis 713
reduction 373
reflectance 515
refrigerants 911
RESEARCH NOTES . . . 133, 137, 301, 305 309, 313, 319, 457, 461, 465, 469, 473, 621
resistance 373
resonance Raman 815
retinal 741, 745
retinal analogue 745
retinal isomerization 745
retinal pigmented epithelium 191
reversible photosensitive media 851
REVIEW ARTICLES 145
rhodium 479, 482
rhodium hydride 479, 482
rotation depolarization 381
$Ru(Bpy)_3^{2+}$ 159, 367, 681
Ru(II) polypyridyl complexes 681
ruthenium complex 159, 681

Saccharomyces cerevisiae 713
salt effects 367
scanning 549
scattering coefficient 857
Schiff base 735, 741
self-assembly 301
semiquinones 359
sensory transduction 773
shuttle vector 39
silk fibroin membrane 505
single-strand breakage 173
single-stranded DNA 39
singlet oxygen 35, 39, 47, 373, 483, 491, 511, 523, 533, 677, 691, 809
singlet oxygen luminescence 691
singlet oxygen quenching 691
singlet oxygen yields 677
site-directed mutagenesis 741
skatole methylene radical 895
small unilamellar vesicle 473
solvent dependence 887
Sorghum bicolor 465
spectral distribution 141, 949
spectral radiometry 141
spectrophotometer 515
Spectroscopy 1, 9, 335, 349, 381, 491, 505, 511, 665, 671, 677
spheroids 425
spin stabilization 359
spin-trapping 533
spiropyran 1
Stentor coeruleus 469

steric hindrance 677
stratosphere 911
stratospheric ozone 911
subcellular localization 697
substituted anthracenes 335
succinoxidase 47
sunlight 165, 305, 549, 765, 867
sunscreen 549
superoxide 359, 533
surface photochemistry 159
surfactants 257
swimming velocity 469

TECHNICAL NOTES 141, 625, 793
temperature dependence 887
tetra(4-sulfonatophenyl)porphine 797
tetraphenylporphin 815
thermophysical properties 911
thylakoid membrane 449
thymidine photochemistry 639, 657
thymidine-PABA photoadducts 657
thymine photochemistry 541, 657
thymine-PABA photoadducts 657
time signals 949
tissue distribution 145
topoisomerases 221
toxicity 911
trans-urocanic acid 165
transcriptional regulation 409
transforming DNA 63
transient spectra 159
transmittance 625
transport 313
4,5',8-trimethylpsoralen 457
triplet radical ion pair state 473
triplet state 491, 677
triplet yields 677
Tris(2,2'-bipyridine)ruthenium(II) 505
tryptophan 671, 753
tryptophan photoproducts 753
tubulin 17
tumor bed effects 145
tumors 145, 431, 931
two-dimensional imaging 287
type I vs type II mechanism 831

ultraweak photon emission 287
underwater light 949
unsaturated lipids 323
urocanate regulation 165
uroporphyrin 797
UV radiation 197, 213, 409, 417, 541, 625, 713, 867
UV radiation effects 97, 103, 213, 221, 309, 401, 409, 417, 541, 549, 561, 705, 713, 723, 793
UV-A 141, 323
UV-B 141, 165, 437, 839, 949
UV-induction 705, 793
UV-induced skin thickening (hyperplasia) 705
UVER 213

vacuum-UV 541
vasculature 145
vesicle 611
Vibrio 293
Vicia 605
visible absorption 887
visible fluorescence 887
visible light 713
Vision 735, 741, 745, 753, 765, 851
Volvox 867

weathering 305
wool 305

YEARLY REVIEWS 283, 284, 290

zinc ions 359
Zn-porphyrin-viologen dyad 473
Z,Z-dienestrol 267

Printed and bound in Great Britain by BPCC Wheatons Ltd, Exeter

145
931
287
831
287
949
323
165
797
. . .
867
. . .
401,
793
323
949
793
) .
705
213
541
145
611
293
605
887
887
713
851
867
305
305
290
359
473
267